

ARTICLE 32 OUTDOOR LIGHTING STANDARDS

32-1 Purpose and Intent

The purpose and intent of these regulations are to establish uniform outdoor lighting regulations and standards that (i) reduce the adverse impacts of excessive glare, unnecessary levels of up light (skyglow), light trespass and overlighting, upon the residents of the County and upon the environment; (ii) promote safety and security; (iii) encourage energy cost savings and energy conservation, and (iv) preserve the rural character of the County.

32-2 Exemptions

The following shall be EXEMPT from the provisions of the regulations contained in Article 32, et. seq.

A. Lighting fixtures and standards required by the Federal Communications Commission, Federal Aviation Administration, Federal and State Occupational Safety and Health Administrations, or other federal or state agencies (to include street lights, traffic signals and signage within public rights-of-way maintained by VDOT).

B. Outdoor lighting fixtures required by law enforcement, the National Guard, the United States Military, fire and rescue organizations, the Virginia Department of Transportation or other emergency response agencies to perform emergency or construction repair work, or to perform night time construction of public facilities.

C. Any lot or parcel over three (3) or more acres in size and which is actively used for one single family residential dwelling and/or agriculture.

D. Holiday lighting.

E. Motion activated light fixtures located anywhere in the County and which:

- (1) emit initial lighting levels of 7000 lumens or less,
- (2) are extinguished within fifteen (15) minutes or less upon cessation of motion, and
- (3) are aimed such that the lamp or light bulb portion of the lighting fixture is not aimed at any point outside of the property boundary.

F. Any lighting fixture with a lamp(s) or bulb(s) rated at a total of 2000 lumens or LESS, and all flood or spot lights with a lamp or lamps rated at 1000 lumens or less. Except that, if any flood or spot light rated 1000 lumens or less is aimed, directed, or focused such as to create glare perceptible to either persons operating motor vehicles on public ways or persons using sidewalks or trails, the lighting fixture shall be redirected or its light output controlled or shielded as necessary to eliminate such conditions.

G. Signs of the type constructed of translucent materials and wholly illuminated from within. Dark backgrounds with light lettering or symbols are preferred, to minimize detrimental effects. Unless conforming to the above dark background preference, total lamp wattage per sign shall be less than 300 watts.

H. Lighting at the Culpeper Regional Airport.

32-3 Applicability and General Provisions

A. Except as provided in Sect. 32-2 above, these regulations shall apply to any installation of new outdoor lighting fixtures or the complete replacement of existing outdoor fixtures. Complete replacement of a fixture shall mean a change of fixture type or change to the mounting height or location of an existing fixture. Routine lighting fixture maintenance, such as changing lamps or light bulbs, ballast, starter, photo control, housing, lenses and other similar components, shall not constitute complete replacement, and shall be permitted.

B. Except as provided in Sections 32-2 and 32-4 herein, all outdoor lighting fixtures shall comply with the following:

1. *Full cut-off* lighting fixtures shall be mounted horizontal to the ground and shall be used for all walkway, parking lot, private street, drive isle canopy and building/wall mounted lighting, and all lighting fixtures located within those portions of open-sided parking structures that are above ground.
2. The use of neon or other box or tube lighting fixtures shall not be permitted on the sides or roofs of buildings, or upon the sides of canopies.
3. Lighting used to illuminate flags, statues, signs or any other objects mounted on a pole, pedestal or platform; as well as entrances or other architectural features, spotlighting or floodlighting used for architectural or landscape purposes, shall consist of *full cut-off* or *directionally shielded* lighting fixtures that are aimed and controlled so that the directed light shall be substantially confined to the object intended to be illuminated. Directional control shields shall be used where necessary to limit stray light and to prevent *point source glare*. In addition, such lighting shall be shielded to protect motorists and pedestrians from point source glare.
4. All illuminated signage located on the sides of a canopy shall be internally illuminated or backlit.
5. On all non-residentially developed land which contains a minimum of twenty (20) parking lot light poles, parking lot lighting levels for ground surface parking lots and the top levels of parking decks or parking structures shall be reduced by at least one-third of full operational levels within one hour after the close of business.

This reduced lighting level shall be achieved by extinguishing at least one-third of the total number of pole mounted lamps, by dimming lighting levels to no more than two-thirds percent of the levels used during business or activity hours, or by some combination thereof; provided, however, that this provision shall not require parking lot lighting levels to be reduced to less than 0.2 footcandles as measured horizontally at the finished grade where the light pole is mounted.

6. Lighting used for construction sites shall consist of the following:
 - (i) All construction site lighting, with the exception of lighting that is used to illuminate the interiors of buildings under construction which is provided for in the following paragraph, shall use full cut-off or directionally shielded fixtures that are aimed and controlled so the directed light shall be substantially confined to the object intended to be illuminated. Directional control shields shall be used where necessary to limit stray light.
 - (ii) For the purposes of this provision, a building is no longer considered under construction once exterior walls and windows are installed and permanent lighting replaces temporary lighting as the primary source of light for the building.
7. All outdoor lighting fixtures shall be aimed, located and maintained so as not to produce *glare*.
8. All outdoor lighting fixtures shall be a maximum forty-five (45) feet in height, as measured from the finished grade to the bottom of the light source or bulb, or less if limited further by the maximum height permitted in the underlying zoning district.
- C. High intensity light beams in the form of outdoor search lights, lasers or strobe lights shall not be permitted except by Special Use Permit issued pursuant to Article 17 herein.

32-4 Additional Lighting Standards for Certain Commercial Uses

Outdoor lighting fixtures associated with service stations, restaurants, fast food restaurants, quick service food stores, retail establishments and vehicle sale, rental and service establishments shall also be subject to the following:

- A. Canopy lighting shall not exceed a maintained lighting level of thirty-five (35) footcandles at any spot under the canopy, as measured horizontally at the finished grade. All underside canopy lighting shall consist of full cut-off lighting fixtures where the light source is either completely flush or recessed within the underside of the canopy.

- B. Outdoor display area lighting used in conjunction with a retail establishment or vehicle sale, rental and ancillary service establishments shall not exceed a maintained lighting level of thirty-five (35) footcandles, as measured horizontally at any spot at the finished grade. For the purposes of this Section, outdoor display areas shall include all display/storage areas for vehicles or other products offered for sale or rent, and any abutting sidewalk and drive isle areas.
- C. Light pole fixtures, shall be no taller than twenty-five (25) feet in height, as measured from the finished grade to the bottom of the light source or bulb.
- D. A photometric plan shall be submitted to the Office of Planning for review for the aforementioned uses in accordance with one of the following:
1. As part of the submission of a Special Use Permit, subdivision plan or site plan. Upon written request with justification, the Zoning Administrator may modify this submission requirement if it is determined that the requirement is not necessary to fulfill the purpose and intent identified in Section 32-1 herein.
 2. As part of the submission of a site plan revision or a canopy building permit not associated with a site plan.
 3. The photometric plan shall be prepared by either: a lighting professional that is certified by the National Council on Qualifications for the Lighting Professions (NCQLP), or a State licensed professional engineer, architect, landscape architect or land surveyor, and shall contain the following information:
 - Location and limits of the canopy or outdoor display area at a scale of not less than 1 inch equals fifty feet (1: = 50'), unless an alternative scale is approved by the Zoning Administrator.
 - Location and height of all canopy lighting and all pole, building or ground mounted lighting fixtures for an outdoor display area.
 - A photometric diagram showing predicted maintained lighting levels produced by the proposed lighting fixtures within the canopy or outdoor display areas.

32-5 Outdoor Recreation/Sports Facility Lighting Requirements

When an outdoor recreation/sports facility has illuminated playing fields or courts that, individually or cumulatively, exceed 10,000 square feet in area, and/or associated light poles that exceed 25 feet in height, when measured from the finished grade to the bottom of the light source or bulb, they shall be subject to the provisions of this Section. Other components of such

facilities, to include, but not limited to, parking lots, administrative offices, restrooms, ticket sales, concession stands and bleachers or other spectator viewing areas, shall not be subject to this Section, but shall be subject to the provisions of Sect. 32-3 above.

- A. A sports illumination plan shall be submitted for review and approval by the Zoning Administrator.
- B. A sports illumination plan shall be prepared by a lighting professional that is certified by the National Council on Qualifications for the Lighting Professions (NCQLP), or a State licensed professional engineer, architect, landscape architect or land surveyor, and shall contain the following information:
 - 1. The boundaries, dimensions and total land area of the outdoor recreation/sports facility property at a designated scale of not less than one inch equals fifty feet (1" = 50'), unless an alternative scale is approved by the Zoning Administrator. For proposed uses on large tracts of land where the lighted playing field or court occupies a small portion of the site, the boundaries, dimensions and total land area of just the lighted playing field/court with perimeter areas, as required by Par. B.2. below, shall be provided, with a graphic that depicts the location of the fields or courts in relation to the perimeter lot lines of the entire property.
 - 2. Location and limits of playing fields/courts, to include a perimeter area. For baseball/softball fields, the perimeter area shall extend thirty (30) feet in a direction perpendicular to the foul lines and away from the field. The perimeter area for rectangular playing fields (such as soccer, football, lacrosse and field hockey), shall extend thirty (30) feet from the end lines and side lines. The perimeter area for all other playing fields/courts shall extend ten (10) feet beyond the playing field or court boundary.
 - 3. Location, height and illustration of each style of all pole, building, and ground mounted lighting fixtures for the playing field or court.
 - 4. A photometric diagram showing predicted maintained lighting levels for the proposed playing field or court and associated perimeter area lighting.
- C. The lighting for playing field/courts and associated perimeter areas shall comply with the maximum footcandle levels indicated for the specific uses listed in the Table below. Footcandle measurements shall be measured horizontally at the finished grade and shall represent maintained lighting levels. The Zoning Administrator shall determine maximum

permitted lighting levels for outdoor recreation/sports facilities which are not listed.

- D. All playing field/court lighting fixtures shall use full cut-off or directionally shielded lighting fixtures, aimed toward the playing field or court, and shielded in directions away from the playing surface so as to minimize glare, uplighting and light trespass onto adjacent areas.

**TABLE OF
MAXIMUM PERMITTED LEVELS OF ILLUMINATION
FOR OUTDOOR RECREATION/SPORTS FACILITY PLAYING
FIELD/COURT**

Recreation/Sport Facility Use Level)	Specific Lighted Area	Footcandles (Maintained Lighting
Archery/Shooting Ranges		35
Baseball/Softball (Players under 16 years old)	Infield Outfield	100 60
Baseball/Softball (Players 16 years old and over)	Infield Outfield	150 100
Baseball Hitting Ranges		50
Basketball, Volleyball		50
Field Hockey, Football, Soccer, Lacrosse, Track & Field		50
Go-Cart Tracks		35
Golf Driving Ranges	Tee Boxes Fairways Greens	35 20 30
Golf (Miniature)		35
Horse Riding Rings/Show Areas		35
Ice Skating, Ice Hockey, Roller Skating Rinks		50
Swimming Pools	Pool Deck	35
Tennis Courts		60